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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
PARK, JUNG H	

ART UNIT	PAPER NUMBER
2465	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/658,727	KARAOGUZ ET AL.	
	Examiner	Art Unit	
	JUNG PARK	2465	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 December 2010*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. In view of the pre-brief conference request filed on 10/07/10, a conference has been held and prosecution has been opened. Non-final office action is applied set forth below.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 11-20 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The broadest reasonable interpretation of a claim drawn to a computer readable medium (also called machine readable medium and other such variations) typically covers forms of non-transitory tangible media and transitory propagating signals *per se* in view of the ordinary and customary meaning of computer readable media, particularly when the specification is silent. *See* MPEP 2111.01. When the broadest reasonable interpretation of a claim covers a signal *per se*, the claim must be rejected under 35 U.S.C. § 101 as covering non-statutory subject matter. *See In re Nuijten*, 500 F.3d 1346, 1356-57 (Fed. Cir. 2007) (transitory embodiments are not directed to statutory subject matter) and *Interim Examination Instructions for Evaluating Subject Matter Eligibility Under 35 U.S.C. § 101*, Aug. 24, 2009; p. 2.

A claim drawn to such a computer readable medium that covers both transitory and non-transitory embodiments may be amended to narrow the claim to cover only statutory embodiments to avoid a rejection under 35 U.S.C. § 101 by adding the limitation "non-transitory" to the claim. *Cf. Animals – Patentability*, 1077 *Off. Gaz. Pat. Office* 24 (April 21, 1987) (suggesting that applicants add the limitation "non-human" to a

claim covering a multi-cellular organism to avoid a rejection under 35 U.S.C. § 101). Such an amendment would typically not raise the issue of new matter, even when the specification is silent because the broadest reasonable interpretation relies on the ordinary and customary meaning that includes signals *per se*. The limited situations in which such an amendment could raise issues of new matter occur, for example, when the specification does not support a non-transitory embodiment because a signal *per se* is the only viable embodiment such that the amended claim is impermissibly broadened beyond the supporting disclosure. *See*, *e.g.*, *Gentry Gallery, Inc. v. Berkline Corp.*, 134 F.3d 1473 (Fed. Cir. 1998).

For claims 11-20, the specification does not limit the definition of the machine-readable storage medium to volatile or non-volatile memory. These two embodiments are given only as examples of what a machine-readable storage medium could be and therefore, the scope of the claim is interpreted as covering other embodiments such as transitory media and therefore, held as non-statutory.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1-3, 8-13, 18-23, and 28-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Garahi et al. (US 2003/0035437, “Garahi”) in view of Schmidt (US 7,058,040, “Schmidt”).

Regarding claim 1, Garahi discloses a method for providing communication in a multi-band multi-protocol hybrid wired/wireless network, the method comprising:

- determining by an access point, a protocol associated with a communication signal for the access point (AP) (access point selects a protocol to support multiple wireless protocols, see abstract and ¶.20; Intelligent Access Point (IAP) uses IEEE 802.11a, 802.11b, and 802.11 g, see ¶.43) and;

- processing the communication signal by a processor within the access point (processor in AP, see 136 fig.2, 136-1 fig.3, ¶.36, and ¶.39).

Garahi discloses that IAP may use low power schemes for short range network connections, such as those presented in IEEE standards 802.11a, 802.11b, and 802.11g (see ¶.43), but does not explicitly disclose "allocating a processor within the access point, the processor compatible with the determined protocol."

However, Schmidt discloses a plurality of CPUs and a plurality of digital signal processors (DSPs) in a communication device (151 and 153 fig.2A) and the processors 151 and 153 can be configured to operate optimally on specific problems (see col.5, lns.51-57)." A DSP is a specialized microprocessor with an optimized architecture for the fast operational needs of digital signal processing.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention to simply combine a plurality of DSPs as taught by Schmidt with the access point of Garahi and to apply the method of allocating one of the DSPs as taught by Schmidt into the access point of Garahi, so that it provides a way of having embedded functions in the DSP since DSP is a special-purpose CPU used for digital signal processing applications for specific problems/tasks such as implementing a

plurality of protocols within an access point (Garahi, see ¶.43; Schmidt, see col.5, lns.51-57).

Regarding claim 2, Garahi is silent on "selecting the allocated processor from a pool of available processors for the processing of the communication signal." However, Schmidt discloses a pool of available processors such as MIPS processor and/or one or more digital signal processors (DSPs) which are configured to operate optimally on specific problems (see col.5, ln.51-59).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention to apply the method of allocating/assigning a specific processor among the processors as taught by Schmidt into the system of Garahi. The motivation is to operate on specific problem optimally and efficiently. For example, the bank of DSPs can be optimized to handle discrete cosine transforms (Schmidt, see col.5, lines 59-66), whereas one of the processors can be used to handle other specific operation such as operating for one of the selected IEEE 802.11 protocols.

Regarding claim 3, Garahi discloses "the allocating further comprises updating the processor to be capable of the processing of the communication signal (updating to be adapted to transmit and receive communication signals, see abstract and ¶.22)."

Regarding claim 8, Garahi discloses "tuning at least one transceiver device to at least one transceiver device to at least one of a receive and a transmit frequency associated with the communication signal (see 134-1 & 134-2 fig.3; processing signals, see 136 fig.2, 136-1 fig.3, ¶.36, and ¶.39)."

Regarding claim 9, Garahi is silent on what Schmidt discloses "the processor is a digital signal processor (DSP) (153 fig.2A and col.5, ln.51-56)." Therefore, this claim is rejected with the similar reasons and motivation set forth in the rejection of claim 1.

Regarding claim 10, Garahi discloses "the protocol is one of an 802.11a, 802.11b, 802.11g and Bluetooth protocol (¶.43)."

Regarding claim 11, it is a machine-readable claim corresponding to the method claim 1, except the limitation of "machine-readable medium (processor, see 136 fig.1; and inherent to a memory to store protocols within IAP, see ¶.43) and is therefore rejected for the similar reasons set forth in the rejection of claim 1.

Regarding claims 12-13 and 18-20, they are claims corresponding to claims 2-3 & 8-10, respectively and are therefore rejected for the similar reasons set forth in the rejection of the claims.

Regarding claim 21, it is a system claim corresponding to the method claim 1 and 2 and is therefore rejected for the similar reasons set forth in the rejection of the claims 1 and 2.

Regarding claims 22-23 and 28-30, they are claims corresponding to claims 2-3 & 8-10, respectively and are therefore rejected for the similar reasons set forth in the rejection of the claims.

Regarding claim 31, Garahi discloses “the at least one integrated transceiver utilizes a single protocol stack for processing the communication signal for the 802.11a, 802.11b, and 802.11g protocols (see ¶.43)", but Garahi is silent on what Schmidt discloses “Bluetooth protocol (col.1, ln.31).”

Therefore, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention to include Bluetooth protocol as taught by Schmidt into the stack of Garahi, so that it provides a way of providing more options for clients looking Bluetooth technology which is available at the time of invention.

6. Claims 4-7, 14-17, and 24-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Garahi in view of Schmidt and further in view of Fry et al. (US 6,810,409, “Fry”).

Regarding claim 4, Garahi and Schmidt are silent on “updating further comprises downloading protocol code compatible with the determined protocol to the processor.” However, Fry discloses “downloading protocol code compatible with the determined protocol to the processor (download protocol code from protocol server, see col.12, lns.62-63). Therefore, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention to apply the method of downloading protocol as taught by Fry into the system of Garahi and Schmidt, so that it provides a way of doing any protocol processing for a specific protocol (Garahi, see ¶.43; Fry, see col.12, lns.58-63).

Regarding claim 5, Garahi discloses “storing the compatible protocol code in a memory (it is inherent to save the protocol code in a memory, otherwise, it is not operable, see ¶.43).”

Regarding claim 6, Garahi is silent on “the downloading further comprises retrieving the compatible protocol code from a portion of the memory.” However, there are memories in the system of Schmidt (see fig.2A).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention to retrieve/read protocol code from a portion of the memory as taught by Schmidt into the system of Garahi in order to get code for operating for a specific task.

Regarding claim 7, Garahi is silent on “associating the determined protocol code with the portion of the memory.” However, there are memories in the system of Schmidt (see fig.2A). Therefore, this claim is rejected with the similar reasons and motivation set forth in the rejection of claim 6.

Regarding claims 14-17 and 24-27, they are claims corresponding to claims 4-7 & 4-7, respectively and are therefore rejected for the similar reasons set forth in the rejection of the claims.

Response to Arguments

7. Applicant's arguments with respect to the amended claim have been considered but are moot in view of the new ground(s) of rejection.

Contact Information

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jung Park whose telephone number is 571-272-8565. The examiner can normally be reached on Mon-Fri during 7:00-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on 571-272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Jung Park/

Examiner, Art Unit 2465